Claims

1. Method for reporting a malfunction of a faulty network node
(K1) in a communication network comprising a number of network
nodes (K1 ..K9),

5 c h a r a c t e r i z e d   i n   t h a t
each operable network node (K2 ..K9) forwards a fault report of
the faulty network node (K1) to all network nodes (Kx) which
are directly adjacent to the operable network node, except in
cases in which a fault report is received which has already

10 been forwarded.

2. Method in accordance with claim 1, c h a r a c t e r i z e d   i n
t h a t , a faulty network node (K1) sends a fault report to all
network nodes (K2, K3, K4, K5) directly adjacent to it.

3. Method in accordance with claim 1, c h a r a c t e r i z e d   i n

15 t h a t ,
   - an operable network node (K2) continuously sends a message
      to be acknowledged to all its directly adjacent network
      nodes (K1, K6, K7),
   - this operable network node (K2) creates a fault report for

20 a network node (K1) from which no acknowledgement was
      received, and
   - this operable network node (K2) sends this fault report to
      all network nodes (K1, K6, K7) directly adjacent to it.

4. Method in accordance with claim 3, c h a r a c t e r i z e d   i n

25 t h a t ,
   - the fault report relates to the faulty network node (K1)
      itself if all its neighboring network nodes (K2, K3, K4,
      K5) identify a fault and
   - the fault report relates to the connection to the faulty

30 network node (K1) if not all its neighboring network nodes
      (K2, K3, K4, K5) identify a fault.

5. Method in accordance with one of the claims 1 to 4, characterized in that a network node (K) which executes higher-ranking functions deduces further steps from the receipt of a fault report.

6. Network node (K2), including
- means for receiving a fault report of a faulty network node (K1),
- means for forwarding this fault report to all its directly adjacent network nodes (K1, K6, K7),
c h a r a c t e r i z e d i n t h a t
- this comprises means for checking whether this fault report has already been forwarded, and
- this comprises a transmission controller which is linked to the means for checking such that a fault report is only forwarded if the outcome of the check is negative.

7. Network node (K1) in accordance with claim 6, c h a r a c t e r i z e d i n t h a t,
- this includes means for detection of a fault, and
- this includes means for sending a fault report to all network nodes directly adjacent to it (K2, K3, K4, K5).

8. Network node (K2) in accordance with claim 6, c h a r a c t e r i z e d i n t h a t,
- this includes means for continuously sending a message to be acknowledged to all its directly adjacent network nodes (K1, K6, K7),
- this includes means for generating a fault report for a network node (K1) from which no acknowledgement was received, and
- this includes means for sending this fault report to all its directly adjacent network nodes (K1, K6, K7).

9. Network node (K2) in accordance with claim 8,

characterized in that,

-   this includes means for checking whether all network nodes
    (K2, K3, K4, K5) adjacent to a faulty network node (K1)
    identify a fault, and

5   -   this includes means for characterizing a fault report such
    that the fault report relates to the faulty network node
    itself (K1) if the result of the check is positive, and
    otherwise the fault report relates to the connection to the
    faulty network node (K1).

10 10. Network node (K2) in accordance with one of the claims 6 to
    9, characterized in that,
    -   this includes means for executing higher-ranking functions,
        and
    -   this includes means for deducing further steps from the
15   reception of a fault report.